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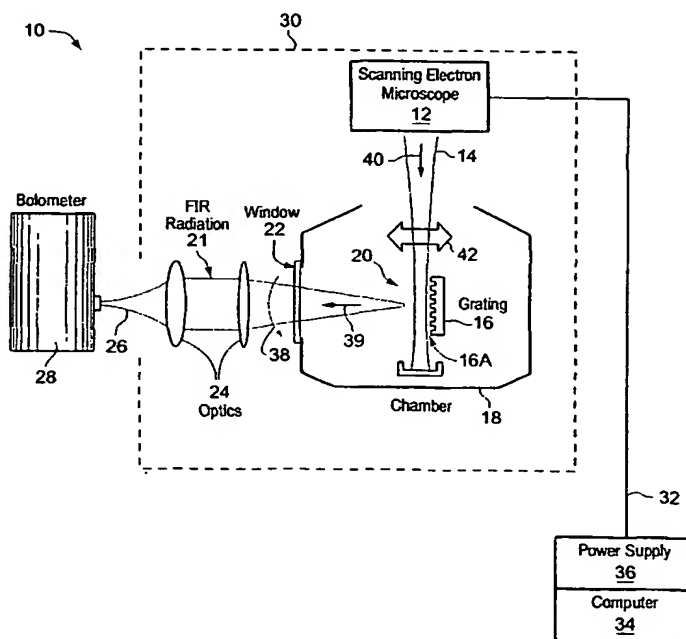
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(54) Title: **FREE ELECTRON LASER, AND ASSOCIATED COMPONENTS AND METHODS**



(57) **Abstract:** A system generates FIR laser radiation. An electron source generates an electron beam. A grating horn interacts with the electron beam to produce the FIR laser radiation. The grating horn may comprise a flat base and a pair of grating elements attached to the base, each of the grating elements being ruled with a grating period, the grating elements oriented in phase and in substantial symmetry about a normal to the flat base.

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